

Appln No. 10/642,435

Amdt date January 19, 2005

Reply to Office action of October 19, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An emergency vehicle traffic signal preemption system;

an intersection communications controller at each intersection for preemption;

a traffic light controller receiving inputs from said communications controller to control the operation of traffic lights and pedestrian lights at an intersection;

a transceiver for receiving information from an emergency vehicle and transmitting information about the status of an intersection;

a real-time status monitor for monitoring status at a selected intersection and verifying preemption of the intersection, said status monitor relaying said status information at said intersection[[s]] to said communications controller;

a transponder in each emergency vehicle receiving said status information being transmitted by said intersection transceiver, said transponder including a transceiver for transmitting emergency vehicle data to said intersection communications controller;

a display in said emergency vehicle displaying the status of said intersection and other emergency vehicles responding to an emergency;

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whereby said emergency vehicle traffic signal preemption system operates autonomously by transmissions to and from said emergency vehicle and intersection.

2. (Original) The system according to Claim 1 in which said intersection communications controller controls the operation of a display at each corner of an intersection to indicate the direction and location of one or more emergency vehicles approaching an intersection.

3. (Original) The system according to Claim 2 in which said status monitor is a real-time status monitor.

4. (Original) The system according to Claim 1 including an audio warning system to alert pedestrians at said intersection.

5. (Original) The system according to Claim 4 in which said audio warning system includes an audio warning circuit receiving an output from said intersection communications controller, said audio warning circuit activating an audio warning device at said intersection.

6. (Original) The system according to Claim 5 in which said audio warning device comprises a speaker at each corner of an intersection.

7. (Original) The system according to Claim 1 in which said transponder includes;

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a transponder communications controller;

an on-board diagnostic circuit, said on-board diagnostic circuit processes data regarding an emergency vehicle and delivering said data to said transponder communications controller;

a transceiver in said transponder transmitting said data from said on-board diagnostic circuit to said intersection.

8. (Original) The system according to Claim 7 in which said transponder transceiver receives status information regarding said intersection;

said intersection status information being delivered to an intersection preemption circuit;

said intersection preemption circuit activating said display in said transponder to indicate the status intersection.

9. (Original) The system according to Claim 8 in which said display includes colored LEDs to indicate the status of an intersection.

10. (Original) The system according to Claim 9 in which said colored LEDs are a green LED, a yellow LED and a red LED, said green, yellow, and red LEDs selectively indicating preemption detected, preemption active or a conflict with another approaching emergency vehicle detected respectively.

11. (Currently Amended) An emergency vehicle traffic signal preemption and control method comprising;

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receiving emergency vehicle critical data at an intersection transceiver;

processing said emergency vehicle critical data in an intersection digital communication controller;

activating a traffic light controller by an output from said communications controller;

activating all traffic and pedestrian lights at an intersection to stop all vehicle and pedestrian traffic at said intersection;

monitoring the status of said traffic light controller, traffic lights and pedestrian lights at said intersection;

verifying preemption of the intersection;

transmitting said status information monitored to said emergency vehicle;

displaying the status of said intersection and other emergency vehicles in said emergency vehicle;

whereby said emergency vehicle traffic light preemption method operates to control the flow of vehicle and pedestrian traffic at an intersection autonomously to allow safe passage of emergency vehicles.

12. (Original) The method according to Claim 11 including;
collecting critical data about said emergency vehicle in an on-board diagnostic circuit;

processing said critical data in a vehicle digital communications controller;

transmitting said emergency vehicle critical data to said transceiver at said intersection.

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13. (Original) The method according to Claim 11 including;
activating an audio alarm at said intersection to alert
pedestrians of the approach of an emergency vehicle.

14. (Original) The method according to Claim 13 in which
said activation of said audio alarm comprises activating an
audio alarm circuit to transmit a predetermined audio
communications.

15. (Original) The method according to Claim 14 in which
said transmission of said audio communication comprises
transmitting said audio communication to a loud speaker at each
corner of said intersection.

16. (Original) The method according to Claim 11 in which
said step of displaying information about the status of an
intersection in said emergency vehicle comprises activating one
of a plurality of colored LEDs.

17. (Original) The method according to Claim 16 in which
said activating one of a plurality of LEDs comprises activating
a red LED to indicate a conflict with another emergency vehicle
approaching an intersection; activating a yellow LED to indicate
said intersection is preempted or activating a green LED to
indicate preemption of said intersection is detected.